THE CLAIMS

Claims 1-30 are pending in the instant application. Claims 1, 11 and 21 are independent. Claims 2-10, 12-20 and 22-30 depend from independent claims 1, 11 and 21, respectively.

Listing of claims:

1. (Previously Presented) A method for facilitating communication in a mesh network using a plurality of wireless access points, the method comprising:

coupling a first wireless access point located in a first cell of the mesh network to at least a second wireless access point located in a second cell of the mesh network;

providing service initially to at least one of a plurality of access devices in the mesh network by said first wireless access point located in said first cell, wherein said at least one of said plurality of access devices generates and maintains a handoff candidate list on its own without being prompted to do so by another access device; and

servicing within the mesh network, said at least one of a plurality of access devices by said at least a second wireless access point located in said second cell, wherein whenever a signal for said at least one of a plurality of access devices falls below a specified threshold, said at least a second wireless access point is selected from said handoff candidate list.

2.   (Previously Presented) The method according to claim 1, wherein said second cell is a neighboring cell located adjacent to said first cell.

3.   (Previously Presented) The method according to claim 2, comprising transmitting a first signal from a first beamforming antenna coupled to said first wireless access point, to said at least a second wireless access point.

4.   (Previously Presented) The method according to claim 3, comprising transmitting a second signal from a second beamforming antenna coupled to said at least a second wireless access point, to said first wireless access point.

5.   (Original) The method according to claim 4, wherein a path for facilitating said transmitting said first signal between said first beamforming antenna and said second beamforming antenna is an uplink channel.

6.   (Original) The method according to claim 5, wherein a path for facilitating said transmitting of said second signal between said second beamforming antenna and said first beamforming antenna is a downlink channel.

7.   (Previously Presented) The method according to claim 6, wherein each of said uplink channel and said downlink channel comprises a backhaul channel.

8.   (Previously Presented) The method according to claim 1, comprising coupling said first wireless access point located in said first cell to at least a third wireless access point located in said first cell.

9.   (Previously Presented) The method according to claim 8, comprising servicing said at least one of a plurality of access devices by said at least a third wireless access point located in said first cell, whenever a signal for said at least one of a plurality of access devices falls below said specified threshold.

10.   (Previously Presented) The method according to claim 9, wherein at least one of said first wireless access point and said at least one of said plurality of access devices determines when said signal for said at least one of a plurality of access devices falls below said specified threshold.

11.   (Previously Presented) A computer-readable medium, having stored thereon a computer program having at least one code section for facilitating communication in a mesh network using a plurality of wireless access points, the at least one code section being executable by a computer for causing the computer to perform the steps comprising:

coupling a first wireless access point located in a first cell of the mesh network to at least a second wireless access point located in a second cell of the mesh network;

providing service initially to at least one of a plurality of access devices in the mesh network by said first wireless access point located in said first cell, wherein said at least one of said plurality of access devices generates and maintains a handoff candidate list on its own without being prompted to do so by another access device; and

servicing within the mesh network, said at least one of a plurality of access devices by said at least a second wireless access point located in said second cell, wherein whenever a signal for said at least one of a plurality of access devices falls below a specified threshold, said at least a second wireless access point is selected from said handoff candidate list.

12.   (Previously Presented) The computer-readable medium according to claim 11, wherein said second cell is a neighboring cell located adjacent to said first cell.

13.   (Previously Presented) The computer-readable medium according to claim 12, comprising code for transmitting a first signal from a first beamforming antenna coupled to said first wireless access point, to said at least a second wireless access point.

14.   (Previously Presented) The computer-readable medium according to claim 13, comprising code for transmitting a second signal from a second beamforming antenna coupled to said at least a second wireless access point, to said first wireless access point.

15.   (Previously Presented) The computer-readable medium according to claim 14, wherein a path for facilitating said transmitting of said first signal between said first beamforming antenna and said second beamforming antenna is an uplink channel.

16.   (Previously Presented) The computer-readable medium according to claim 15, wherein a path for facilitating said transmitting of said second signal between said second beamforming antenna and said first beamforming antenna is a downlink channel.

17.   (Previously Presented) The computer-readable medium according to claim 16, wherein each of said uplink channel and said downlink channel comprises a backhaul channel.

18.   (Previously Presented) The computer-readable medium according to claim 11, comprising code for connecting said first wireless access point located in said first cell to at least a third wireless access point located in said first cell.

19.　(Previously Presented) The computer-readable medium according to claim 18, comprising code for servicing said at least one of a plurality of access devices by said at least a third wireless access point located in said first cell whenever a signal for said at least one of a plurality of access devices falls below said specified threshold.

20.　(Previously Presented) The computer-readable medium according to claim 19, wherein at least one of said first wireless access point and said at least one of said plurality of access devices comprises code for determining when said signal for said at least one of a plurality of access devices falls below said specified threshold.

21.　(Previously Presented) A system for facilitating communication in a mesh network using a plurality of wireless access points, the system comprising:

at least one circuitry that couples a first wireless access point located in a first cell of the mesh network to at least a second wireless access point located in a second cell of the mesh network;

said at least one circuitry provides service initially to at least one of a plurality of access devices in the mesh network via said first wireless access point located in said first cell, wherein said at least one of said plurality of access devices generates and maintains a handoff candidate list on its own without being prompted to do so by another access device; and

said at least one circuitry facilitates servicing within the mesh network, of said at least one of a plurality of access devices by said at least a second wireless access point located in said second cell, wherein whenever a signal for said at least one of a plurality of access devices falls below a specified threshold, said at least a second wireless access point is selected from said handoff candidate list.

22.   (Previously Presented) The system according to claim 21, wherein said second cell is a neighboring cell located adjacent to said first cell.

23.   (Previously Presented) The system according to claim 22, comprising a first beamforming antenna coupled to said first wireless access point for transmitting a first signal from said first wireless access point to said at least a second wireless access point.

24.   (Previously Presented) The system according to claim 23, comprising a second beamforming antenna coupled to said at least a second wireless access point for transmitting a second signal from said at least a second wireless access point to said first wireless access point.

25. (Original) The system according to claim 24, wherein a path for facilitating said transmitting between said first beamforming antenna and said second beamforming antenna is an uplink channel.

26. (Original) The system according to claim 25, wherein a path for facilitating said transmitting between said second beamforming antenna and said first beamforming antenna is a downlink channel.

27. (Previously Presented) The system according to claim 26, wherein each of said uplink channel and said downlink channel comprises a backhaul channel.

28. (Previously Presented) The system according to claim 21, wherein said at least one circuitry couples said first wireless access point located in said first cell to at least a third wireless access point located in said first cell.

29. (Previously Presented) The system according to claim 28, wherein said at least one circuitry services said at least one of a plurality of access devices via said at least a third wireless access point located in said first cell, whenever a signal for said at least one of a plurality of access devices falls below said specified threshold.

30.   (Previously Presented) The system according to claim 29, wherein at least one of said first wireless access point and said at least one of said plurality of access devices determines when said signal for said at least one of a plurality of access devices falls below said specified threshold.